

Claims

1. A fluid dispensing apparatus for dispensing a predetermined volume of fluid comprising:

(a) a fluid reservoir with a fluid inlet for the introduction of the fluid into said fluid reservoir, and a fluid outlet for the release of said fluid from said fluid reservoir;

(b) a fill tube assembly connected to said fluid outlet, the fill tube assembly comprising

(i) a fill valve capable of controlling the flow of fluid released from said fluid reservoir into the fill tube assembly, and

(ii) a drain line provided with a discharge valve for dispensing a predetermined volume of fluid from said fill tube assembly;

(c) a pair of electroconductive terminals proximate either said fill tube assembly or said fluid reservoir and means for connecting said terminals to an energy source so that a current can be passed from one terminal to the other terminal; and

(d) control means responsive to the capacitance of said current for selectively controlling said dispensing of fluid from said tube assembly, or said introduction of fluid from said reservoir, or said release of fluid from said reservoir.

2. The fluid dispensing apparatus of claim 1, wherein said electroconductive terminals consists essentially of electroconductive strips affixed to the external surface of said fill tube assembly.

3. The fluid dispensing apparatus of claim 1, wherein one of said electroconductive terminals is affixed to the external surface of said fill tube assembly, and the other of said electroconductive terminals is positioned internally within said fill tube assembly.

4. The fluid dispensing apparatus of claim 2, wherein the electroconductive strips are both made substantially of copper.

5. The fluid dispensing apparatus of claim 1, wherein the current passed from one terminal to the other terminal is a pulsed current.

6. The fluid dispensing apparatus of claim 1, wherein the control means is operative to open manually the discharge valve for a determinable time period to thereby dispense a determinable volume of fluid.

7. A single-use fluid dispensing cartridge, suitable for installation into a fluid dispensing apparatus, comprising:

(a) a pliable fluid reservoir having an upper opening, a fluid inlet for introducing fluid into the pliable fluid reservoir, and a fluid outlet for releasing fluid from said pliable fluid reservoir;

(b) a fill tube assembly connected to said upper opening, at one end, and to said fluid outlet, at another end, forming a loop with said fluid reservoir, the fill tube assembly comprising

(i) a first area suitable for provision of a fill valve in said closed loop for controlling the flow of fluid released from said pliable fluid reservoir into the fill tube assembly, and

(ii) a drain line with a second area suitable for provision of a discharge valve for dispensing a predetermined volume of fluid from said fill tube assembly; and

(c) a pair of electroconductive terminals affixed to either said fill tube assembly or said pliable fluid reservoir.

8. The single-use fluid dispensing cartridge of claim 7, wherein said electroconductive terminals consist essentially of electroconductive strips affixed to the external surface of said fill tube assembly.

9. The single-use fluid dispensing cartridge of claim 8, wherein one of said electroconductive terminals is affixed to the external surface of said fill tube assembly, and the other of said electroconductive terminals is affixed to the internal surface of said fill tube assembly.

10. The single-use fluid dispensing cartridge of claim 9, wherein the electroconductive strips are both made substantially of copper.